BEFORE THE CALIFORNIA ENERGY COMMISSION
OF THE STATE OF CALIFORNIA

In the Matter of: Preparation of the 2005 Integrated Energy Policy Report	Docket No. 04-IEP-1K

COMMENTS OF THE COGENERATION ASSOCIATION OF CALIFORNIA AND THE ENERGY PRODUCERS AND USERS COALITION ON THE 2005 COMMITTEE DRAFT INTEGRATED ENERGY POLICY REPORT

Michael Alcantar
Rod Aoki
Alcantar & Kahl LLP
1300 SW Fifth Avenue
Suite 1750
Portland, OR 97201
503.402.9900 office
503.402.8882 fax
mpa@a-klaw.com
rsa@a-klaw.com

Counsel to the Cogeneration Association of California

Evelyn Kahl
Nora Sheriff
Alcantar & Kahl LLP
120 Montgomery Street
Suite 2200
San Francisco, CA 94104
415.421.4143 office
415.989.1263 fax
ek@a-klaw.com
nes@a-klaw.com

Counsel to the Energy Producers and Users Coalition

October 14, 2005

BEFORE THE CALIFORNIA ENERGY COMMISSION
OF THE STATE OF CALIFORNIA

In the Matter of: Preparation of the 2005 Integrated Energy Policy Report	Docket No. 04-IEP-1K

COMMENTS OF THE COGENERATION ASSOCIATION OF CALIFORNIA AND THE ENERGY PRODUCERS AND USERS COALITION ON THE 2005 COMMITTEE DRAFT INTEGRATED ENERGY POLICY REPORT

The Cogeneration Association of California[1] (CAC) and the Energy Producers and Users Coalition[2] (EPUC) submit the following comments to the California Energy Commission (Energy Commission) on the Draft 2005 Integrated Energy Policy Report (IEPR, Energy Report or Report). The comments are submitted pursuant to the Energy Commission's September 15, 2005 Notice of Committee Hearings and Availability of the 2005 Committee Draft Energy Report.

---

[1] CAC represents the power generation, power marketing and cogeneration operation interests of the following entities: Coalinga Cogeneration Company, Mid-Set Cogeneration Company, Kern River Cogeneration Company, Sycamore Cogeneration Company, Sargent Canyon Cogeneration Company, Salinas River Cogeneration Company, Midway Sunset Cogeneration Company and Watson Cogeneration Company.

[2] EPUC is an ad hoc group representing the electric end use and customer generation interests of the following companies: Aera Energy LLC, BP America Inc. (including Atlantic Richfield Company), Chevron U.S.A. Inc., ConocoPhillips Company, ExxonMobil Power and Gas Services Inc., Shell Oil Products US, THUMS Long Beach Company, Occidental Elk Hills, Inc., and Valero Refining Company - California.

I. INTRODUCTION

The obstacles faced by both existing and new Combined Heat and Power projects (CHP) in California are real and are accurately described in the Energy Report. As discussed in the Report, due to these obstacles, new CHP projects are not being built. Similarly noted in the Report, existing projects are in jeopardy due to their inability to obtain long term commitments for the delivery of their power with just and reasonable terms and conditions. Indeed, some CHP sites have removed their CHP facilities entirely in favor of the thermal reliability that boilers can provide.

The Energy Report correctly concludes that in order to preserve and secure the many benefits which CHP provides to the State, policies must change and obstacles must be cleared. Based upon a comprehensive review of these issues through staff and consultant reports, the receipt of both oral and written comments from all interested parties, and workshops on the issues, the Energy Report proposes realistic solutions to these obstacles. Taken together, the Energy Report's recommendations for CHP form a foundation which can insure that the benefits of CHP are retained for the State. This will require, however, a commitment to actual implementation of the Energy Report's recommendations at both the California Public Utilities Commission (CPUC) and the California Independent System Operator (CAISO). CAC/EPUC looks forward to working with the Energy Commission in these efforts and once again, commends the IEPR Committee and Commission Staff on their development of a comprehensive and meaningful IEPR for 2005.

II. DISCUSSION

A. The Energy Report Accurately Describes The Current State Of CHP In California.

The Energy Report correctly states that there is approximately 9000 MW of existing CHP capacity in California, representing approximately 17 percent of generation. (Report at 63) 90% of this capacity is from systems greater than 20 MW in size. (Id.) There is also a market potential for new CHP in the range of 5400 MW. (Id.) Despite policy preferences for these resources set forth in state statute, and expressed by both the Energy Commission and the CPUC, the Report notes that CHP deployment in California has "*struggled with major barriers to market entry and policy implementation in the context of traditional utility cost-of-service grid management*." (Id.) The Report also accurately notes that "*many larger-scale CHP systems in operation today … are at risk of shutting down in the near future as their contracts expire*." (Id.) The Report estimates that as much as 2,000 MW is at risk of shutting down between now and 2010 due to the inability of owners to renew contracts with utilities. (Id.)

The Report supports its assessment with real world examples of existing and new facilities that have not been able to secure long term contracts with the utilities or which have been stymied by regulatory uncertainty. The Report discusses the fact that Berry Petroleum physically removed its CHP systems entirely and installed traditional boilers to meet its heating needs. This removal was due to the administrative difficulties of renewing long standing utility power purchase arrangements. (Report at 64) The Report also references the difficulty

that CAC member KRCC was confronted with when attempting to obtain a PPA with Southern California Edison Company (SCE); noting that "*owners of a 300 MW facility that has been reliably providing enough power to serve more than 400,000 SCE customers for two decades have been attempting to negotiate a new contract for more than two years*." (Report at 64-65) The Report also discusses the situation faced by EPUC member Valero noting that it is "*troubling that Valero has received permits to install a second generating unit at its refinery, but is reluctant to do so because of the project's "regulatory limbo" between FERC and CPUC jurisdictions*." (Report at 65)

With regard to the refinery sector in particular, the Report states that "*despite the clear benefits of cogeneration in providing on-site electricity and using process waste products for fuel, utility procurement issues and regulations limiting the export of surplus electricity continue to put a damper on cogeneration expansion at California's refineries*." (Report at 27) The Report recommends that the Commission "*work with the refinery industry and other agencies to identify opportunities for additional cogeneration to meet environmental goals; and work closely with electric utilities to resolve issues which currently prohibit or limit the sale of on-site cogeneration-generated electricity from refineries to outside customers*." (Id.)

The Report also discusses other obstacles facing CHP operators and developers such as: difficulty finding customers interested in purchasing "excess" power at the wholesale level; lack of a robust, functioning wholesale market; difficulties with the complexity and cost of complying with CAISO tariff

requirements (for example, scheduling exports hour-by-hour, installing costly metering and reporting equipment, etc.). (Report at 64) The Report states unequivocally that state policies must change for California to tap into this potential generation source and, "*equally important, retain the existing pool of CHP so critical to the reliable operation of the grid*." (Id.)

B. The Report Correctly Describes The Benefits Which CHP Provides To The State.

The Energy Report defines CHP as "*the most efficient and cost effective form of DG, providing numerous benefits to California including reduced energy costs, more efficient fuel use, fewer environmental impacts, improved reliability and power quality, locations near load centers, and support of utility transmission and distribution systems*." (Report at 63) Additionally, as Commissioner Boyd has stated on more than one occasion, CHP can be critical to the energy security of this state in these post 9/11 times and as recent natural disasters have made so evident. (Transcript of Proceedings, July 25, 2005 at 205) The Report also recognizes however, that if California is derelict in addressing barriers for CHP owners and these strategic generation resources go away, many of these benefits will be lost. This would include but not be limited to: congestion and reliability issues being compounded; natural gas resources and infrastructure being adversely affected; and adverse effects on the environment due to the increases in boiler installations to meet thermal loads. Furthermore, if companies decide to leave California because of energy costs and security concerns, it will have a detrimental impact on well-paying jobs in the industrial sector. (Report at 66)

Despite the unequivocal recognition of the benefits of CHP contained in the Energy Report, various Staff Reports in this proceeding, and by a number of parties to this proceeding, certain parties allege that these benefits do not exist. At the October 6, 2005 hearing in this proceeding, representatives of PG&E challenged both the efficiencies and environmental benefits of CHP resources. Although PG&E did not directly challenge the efficiencies and benefits of CHP plants installed "*predominantly for the self generation of electricity and steam*" such as CAC and EPUC member plants, PG&E did incorrectly allege that "*a typical cogeneration plant in this state that meets the PURPA minimum requirements operates at a much lower efficiency than a modern combined cycle plant … even taking into account the separate steam needs that a steam generator, an onsite steam generator would produce to meet an equivalent amount of steam that a cogenerator would produce*." (Transcript of Proceedings, October 6, 2005 at 95) Incredibly, PG&E's representative then went on to state that *"[a] combined cycle power plant is just another form of cogeneration. It takes the waste heat and produces more electricity. So we just have another, a cogeneration plant by a different name*." (Id.)

PG&E's allegations are simply false and demonstrate why long term standard offer contracts are required to assure CHP survival and encouragement in California. The realities of California CHP stand in stark contrast to PG&E's assertions. With respect to natural gas-fired combined cycle power plants, the La Paloma combined cycle power plant reported to the Energy Information Agency (EIA) a 2003 heat rate of 7,364 Btu/kWh or a LHV efficiency of about

51%. In contrast, the 2003 average efficiency for California's existing CHP greater than 20 MW was over 73%[3] which far exceeds that of new combined cycle power plants. Moreover, enhanced oil recovery CHP (EOR) has an efficiency on the order of 80% which is more than 1.5 times that of the La Paloma facility. On PG&E's system alone, EOR CHP represents natural gas fuel savings[4] of over 10 trillion Btus annually.

PG&E's claim that CHP is just another combined cycle power plant also fails under scrutiny. As this Commission is well aware electric utility power plants that provide no useful thermal energy for heating, cooling or process are not equivalent to CHP facilities. PG&E's testimony presents yet more evidence to support the importance of the Energy Report's recommendations for CHP. Absent implementation of the Reports' recommendations, it is clear that the utility will simply refuse to even acknowledge the operational differences in these stridently different technologies. Thus, long-term standard offer contracts must be employed to prevent these very real barriers to CHP preservation and development. Absent such contracts, the utilities are perfectly positioned to render the harmonizing of electric production with industrial thermal energy requirements impossible for existing and new cogeneration.[5]

---

[3] Based on data reported to the Energy Information Agency.

[4] Assumptions: PG&E 2002 EOR purchases 5,200,000 MWh; Industrial boiler efficiency 80%; EOR cogeneration efficiency 80%; power plant heat rate of 7,400 Btu/kWh.

[5] The need for long-term standard offer contracts is also highlighted by the following facts: (1) the standard offer 1 contract option made available through CPUC Decision 04-01-050 only extends to QF contracts which expire prior to January 1, 2006 (D.04-01-050 at 157); and (2) the anomalous as-available capacity payment to QFs in the SCE service territory is only $4.93/kW-year versus $66.43/kW-year for PG&E and $70.34/kW-year for SDG&E.

PG&E's representatives also challenged the environmental benefits of CHP contrary to the Energy Commission's findings that the state "*should use CHP to effectively provide air quality and greenhouse gas reduction benefits while reducing transmission and distribution congestion*." (Report at 67) PG&E's claim that combined cycle generation is "cleaner" than CHP completely ignores the fact that CHP in California eliminates the need for consuming significant amounts of "additional" natural gas which is the equivalent of zero emissions for all such natural gas savings. In fact, in order to maintain the environmental benefits associated with CHP, the Energy Report recommends that California should explore production credits for CO2 reductions provided by CHP. (Report at 68) The environmental benefits of CHP are clear and are described in more detail in CAC/EPUC's comments filed in this docket on July 22, 2005.

C. Each of the Key Initiatives Described In the Energy Report Addresses a Real Obstacle To CHP.

The Energy Report proposes a number of key initiatives to both preserve and promote the benefits of CHP for California. Each of these recommendations responds to a real and existing obstacle to CHP and forms an important framework against which California CHP may reliably operate.

First, the Report recommends that CHP is of "*such unique value in terms of meeting the loading order's efficiency and new generation objectives that CHP warrants its own designation in the loading order*." (Report at 65) This is for the purpose of insuring that CHP issues and strategies are not subsumed by broader DG issues and strategies. (Id.) While the Energy Action Plan II does specifically include CHP as a preferred loading order resource, this clarification would

address allegations that CHP is really only a subset of Distributed Generation and therefore policies favoring CHP should only apply to very small CHP facilities. That the Committee intended the recommendations contained in the Energy Report to apply to large CHP facilities is plainly stated in the Energy Report. The Report clearly recognizes that 90 percent of the State's overall CHP capacity is from systems larger than 20 MW in size. Moreover, the Report states "*CHP systems smaller than 5 MW represent only about 3 percent of total CHP capacity in the state*." (Report at 64) The Report recommends that the state should "*broaden its policy focus to include large-scale CHP, which could produce several thousand MW of additional generation capacity in the state during the next 15 years*." (Id.)

The Report also recommends that the state improve access to wholesale energy markets and CHP owners' ability to secure long-term utility contracts to allow these owners to sell their excess electricity. (Report at 65) Specifically, the Report recommends that by the end of 2006, "*the CPUC should require IOUs to buy, through standard offer contracts, all electricity from CHP plants in their service territories as delivered at the utility's avoided cost, as determined by the CPUC in R.04-04-025*." (Report at 66) This is the proper forum for issues of cost to be comprehensively addressed. The Report also provides that these long-term contracts should be of sufficient length to enable CHP owners to "*make well-informed investment decisions while providing appropriate assurances to the Energy Commission and utilities of their availability for long-range planning purposes*." (Id.) The Report recommends that the terms of these contracts

should be ten years at a minimum; however, it also proposes that the Energy Commission and CPUC work together to evaluate whether the contracts should have terms with the same economic life as the avoided resources. (Id.) This would provide CHP owners with certainty to guide their investment decisions to install or expand CHP operations to meet their full thermal needs. As discussed above, CHP owners, both existing and new, have not been able to negotiate long-term contracts with California utilities to provide the operational certainty which they require.

The Report recognizes that CHP owners are not in the business of producing or selling electricity; and that CHP resources are not and will never be fully dispatchable merchant facilities, designed solely for the purpose of producing power. (Report at 65) The Report concludes that CHP policy therefore cannot be similar to policies developed for more traditional customer generators or merchant power plants. (Id.) For these reasons, the Report appropriately recommends that by the end of 2006, "*the CA ISO should modify its tariffs for CHP owners to recognize the unique operational requirements of CHP and allow owners to sell power to the grid at reasonable and appropriate prices*." (Id.) The Report notes that this is "*particularly important in light of the value that CHP provides IOUs and the CA ISO in addressing transmission congestion and local reliability issues*." (Id.)

The Report also recommends that the Energy Commission and CPUC establish mechanisms in the procurement process to ensure that existing CHP systems continue to be a baseload portion of the IOUs' portfolios. (Report at 67)

This recommendation is consistent with the Report's recognition of the unique operational characteristics of CHP and the fact that such capacity cannot be dispatched at the whim of a utility or the CAISO. The recommendation also responds to the fact that each of the California IOUs has in the recent past sought (and in two cases received) approval from the CPUC to obtain significant new capacity (Mountainview, Palomar, Contra Costa 8). While these facilities are thought to be dispatchable in the short term, they could easily be operated in a baseload fashion to effectively replace CHP capacity in the utilities' baseload portfolios. Finally, the Report notes that the Assessment of California CHP Market and Policy Options for Increased Penetration determined a realistic goal of 5,400 MW of new CHP in California by 2020. (Id.) The Report recommends that by the end of 2006, the Energy Commission and CPUC should work collaboratively to translate this goal into yearly procurement targets for IOUs. (Id.) Given the many obstacles described above for existing CHP which has been operating reliably for years, this type of effort by the energy agencies is necessary in order to appropriately encourage any new CHP to be built.

D. The Energy Report's Recommendations Are Consistent With State Law and The Energy Action Plan II.

The Committee should be assured that each of its recommendations for CHP described above is perfectly consistent with both State law and the State's Energy Action Plan II. As discussed above, Energy Action Plan II identifies CHP as a preferred loading order resource on par with renewable resources. Accordingly, the preservation and encouragement of this resource has been determined to be a priority of the State. Moreover, as set forth in CAC/EPUC's

comments filed in this proceeding on December 2, 2004, the encouragement of CHP is State law. California's Warren-Alquist Act explicitly commits the State to the promotion and development of cogeneration:

> *§ 25004.2. The Legislature further finds that cogeneration technology is a potential energy resource and should be an important element of the state's energy supply mix. The Legislature further finds that cogeneration technology can assist meeting the state's energy needs while reducing the long-term use of conventional fuels, is readily available for immediate application, and reduces negative environmental impacts. The Legislature further finds that cogeneration technology is important with respect to the providing of a reliable and clean source of energy within the state and that cogeneration technology should receive immediate support and commitment from state government.*

Consistent with this commitment, California Public Utilities Code Section 372 (a) states in pertinent part that:

> *[i]t is the policy of the state to encourage and support the development of cogeneration as an efficient, environmentally beneficial, competitive energy resource that will enhance the reliability of local generation supply, and promote local business growth. ****

In order to facilitate this policy, the Legislature also enacted Section 372(f) for the purpose of encouraging:

> *… the continued development, installation, and interconnection of clean and efficient self-generation and cogeneration resources, to improve system reliability for consumers by retaining existing generation and encouraging new generation to connect to the electric grid, and to increase self-sufficiency of consumers of electricity through the deployment of self-generation and cogeneration ….*

Just as importantly however, the recommendations contained in the Report are not novel by any means. Instead, they are consistent with over twenty years of reliable operating experience in California and consistent with the

original regulatory compact provided by the State to encourage private investment in these very beneficial resources.

E. The Energy Report Is Correct That There Should Be No Delay In Implementing These Recommendations.

In response to those that would propose that the Energy Commission refrain from acting on CHP issues now or conduct further study, the Report is clear that critical actions to preserve existing and promote new CHP must be undertaken by the end of 2006. This would include modification of CAISO tariffs to recognize the unique operating characteristics of CHP, and having the IOUs buy, through standard offer contracts, all electricity from CHP plants in their service territories. This is because the Report recognizes that the construction of new CHP facilities and the preservation of existing CHP is at risk precisely because of delays in implementation of just the types of recommendations contained in the Report.

Moreover, as the Report also determines, progress on these important issues need not be delayed due to the recently enacted Energy Policy Act. As the Report states "*recent federal energy legislation suggests that the Public Utilities Regulatory Policies Act is likely to remain in effect in California due to the lack of a robust and functioning wholesale market in the state*." (Report at 66)[6]

---

[6] The newly enacted Section 210(m) of PURPA sets forth very specific tests which FERC must find have been satisfied prior to a utility being relieved of certain of its obligations under PURPA. Specifically, FERC must determine that the QF in question has nondiscriminatory access to:

> *(A)(i) independently administered, auction-based day ahead and real time wholesale markets for the sale of electric energy; and (ii) wholesale markets for long-term sales of capacity and electric energy; or*

III. CONCLUSION

The Energy Report represents a substantial step in the direction of setting in place the policies and framework necessary to preserve the benefits of existing CHP and to obtain new benefits for the State. The benefits of CHP will only be secured for the State however if the positive recommendation for CHP contained in the Energy Report are implemented. CAC/EPUC looks forward to working with the Energy Commission to implement these recommendations at the CPUC and CAISO.

Dated: October 14, 2005

Respectfully submitted,

Michael Alcantar
Rod Aoki

Counsel to the Cogeneration Association of California

Evelyn Kahl
Nora Sheriff

Counsel to the Energy Producers and Users Coalition

(B)(i) transmission and interconnection services that are provided by a Commission-approved regional transmission entity and administered pursuant to an open access transmission tariff that affords nondiscriminatory treatment to all customers; and (ii) competitive wholesale markets that provide a meaningful opportunity to sell capacity, including long-term and short-term sales, and electric energy, including long-term, short-term and real-time sales, to buyers other than the utility to which the qualifying facility is interconnected. In determining whether a meaningful opportunity to sell exists, the Commission shall consider, among other factors, evidence of transactions within the relevant market; or

(C) wholesale markets for the sale of capacity and electric energy that are, at a minimum, of comparable competitive quality as markets described in subparagraphs (A) and (B).